

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-027531**Date Inspected:** 02-May-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** As noted below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** SAS OBG**Summary of Items Observed:**

Quality Assurance Inspector (QA) Douglas Frey was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

**12W PP109.5 W2-TS (Interior)**

This QA Inspector performed Magnetic Particle (MT) testing on the Transverse Stiffener (TS) of the Deck Access Hole (DAH) located at 12W PP109.5 W2 on the interior of the OBG. This QA Inspector performed MT testing utilizing the yoke method in conformance with ASTM E 709 and the standard of acceptance with D1.5 section 6.26. This QA Inspector noted that no rejectable indications were found at the time of testing. This QA Inspector generated a TL-6028 MT report on this date. The completed work at this location appeared to be in general conformance with the contract specifications.

**12E PP109.5 E5 LSE/LSW/TS (Interior)**

This QA Inspector performed MT testing on the TS, East Longitudinal Stiffener (LSE) and the West Longitudinal Stiffener (LSW) of the DAH located at 12E PP109.5 E5 on the interior of the OBG. This QA Inspector performed MT testing utilizing the yoke method in conformance with ASTM E 709 and the standard of acceptance with D1.5 section 6.26. This QA Inspector noted that no rejectable indications were found at the time of testing. This QA Inspector generated a TL-6028 MT report on this date. The completed work at this location appeared to be in general conformance with the contract specifications.

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## WELDING INSPECTION REPORT

( Continued Page 2 of 3 )

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This QA Inspector performed an Ultrasonic (UT) inspection on approximately 10% of the welds on the LSE and the LSW. These welds were previously accepted by QC Ultrasonic technicians in accordance with AWS D1.5-2002, section 6, table 6.3. This QA observed no rejectable indications at the time of testing. This QA generated a TL-6027 UT report on this date. The completed work observed at this location appeared to be in compliance with the contract specifications. Note: The Transverse Stiffener at this location is of a different configuration and was welded with a 7/16" fillet as required by the contract documents and does not require Ultrasonic Testing.

### 12E PP109.5 E2-LSE (Interior)

This QA Inspector made random observations of ABF welder Todd Jackson (ID 4639) performing the Shielded Metal Arc Welding (SMAW) Process in the 3G vertical position utilizing E 9018-H4R electrodes on the LSE of the DAH located at 12E PP109.5 E2 on the interior of the OBG. The welder was observed utilizing the Pro-Heat 35 thermal heating blankets for face "B" of the complete penetration joint (CJP) to pre-heat and provide constant heat to the work. QC Inspector John Pagliero verified the temperature and recorded the parameters as acceptable and within the requirements of ABF-WPS-D1.5-1012-3. The welder was observed installing run off tabs and began welding the height of the joint followed by grinding and blending of the work utilizing a small disc grinder. On a subsequent observation, this QA Inspector noted that the welding was performed in the vertical position utilizing the E9018-H4R low hydrogen electrodes. The 3.2mm electrodes were stored in electrically heated, thermostatically controlled oven after removal from the sealed containers. The exposure limits of the electrodes appeared to comply with the minimum storage oven temperature of 120 degrees Celsius as per the contract documents. The welding parameters and surface temperatures were verified by the QC inspector's utilizing a Fluke 337 clamp meter to measure the electrical welding parameters and Tempilstik Heat Indicators for verifying the preheat and inter-pass temperatures. At the time of the observation no issues were noted by the QA. On subsequent observations throughout the shift to monitor quality, it was noted that the work was in progress and appeared to be in general conformance with the contract documents.

### 6W PP46.5 W2-DAH (Exterior)

This QA Inspector randomly observed QC Inspector John Pagliero perform Ultrasonic Inspection of the DAH at 6W PP46.5 W2 on the exterior of the OBG. Mr. Pagliero was observed performing the procedure for the examination of welds using the Ultrasonic Testing method as outlined in the Smith Emery Ultrasonic procedure no: SE-UT-D1.5-CT-108. Mr. Pagliero identified a total of seven (7) rejectable indications and is listed below.

1. y+1660mm: 30mm in length and 7mm deep.
2. y+2065mm: 190mm in length and 7mm deep.
3. y+2410mm: 155mm in length and 9mm deep.
4. y+2685mm: 65mm in length and 9mm deep.
5. y+3315mm: 15mm in length and 16mm deep.
6. y+3485mm: 100mm in length and 4mm deep.
7. y+3865mm: 90mm in length and 13mm deep.

The Inspection and testing performed by Mr. Pagliero appeared to comply with the contract documents.

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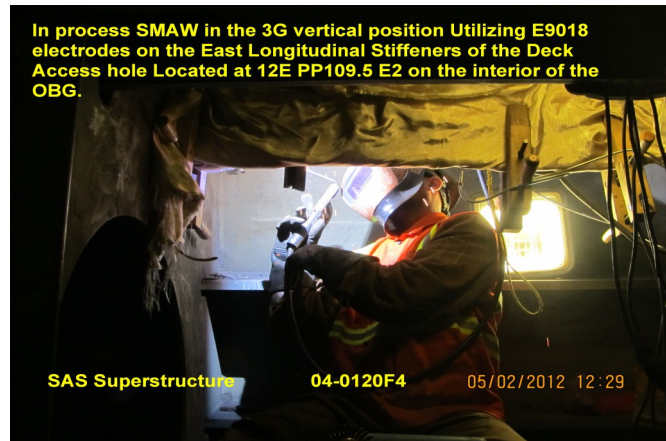
## WELDING INSPECTION REPORT

( Continued Page 3 of 3 )

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### Summary of Conversations:

There were no pertinent conversations today.



### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910 , who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Frey,Doug	Quality Assurance Inspector
<b>Reviewed By:</b>	Levell,Bill	QA Reviewer

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